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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/926,790	03/18/2002	Anders Engqvist	ENGQ3001/JEK	8656

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EXAMINER

MISTRY, O NEAL RAJAN

ART UNIT	PAPER NUMBER
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2625

DATE MAILED: 04/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/926,790

Applicant(s)

ENGQVIST ET AL.

Examiner

O'Neal R Mistry

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 18 March 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 7-11 is/are rejected.
- 7) ☒ Claim(s) 6 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03/18/2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This application has been examined.

Claims 1-11 are presented for examination.

Drawings

The drawings are objected to because Figures 3 & 5 are not labeled to describe the illustration. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

The specification structure layout is objected because specification does not follow the document structure below.

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (e) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (f) BRIEF SUMMARY OF THE INVENTION.
- (g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (h) DETAILED DESCRIPTION OF THE INVENTION.
- (i) CLAIM OR CLAIMS (commencing on a separate sheet).
- (j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 7, & 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Geiger et al (U.S. Patent Number 5,544,757).

In regards to claims 1 and 8, Geiger discloses a method for detecting the wood surface profile of a log, characterized in that one optical image analysis system and at least one further measuring system is used for determine the wood surface profile (col. 4 line 39-45).

In regards to claim 7, Geiger discloses that measurement results, obtained by some other measuring method, are used integrated in the image analysis to determine the wood surface profile (col. 8 line 12-19, Figure 3, Note the examiner interprets that after the system has done a calculation for each log piece of wood, the system at the end of belt determines if the logs belong in belt item 5 or item 4. In conclusion, the examiner interprets that a determination is computed for the wood profile.)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

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1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 2,3,4,5, 7/2,9,10,11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Geiger et al (U.S. Patent Number 5,544,757) as applied to claims 1, 7/1, 8 in view of Savard et al (U.S. Patent Number 6,072,890).

In regards to claims 2 & 9, Geiger teaches a system for sorting logs depending on the characteristics of the logs. The logs are sorted by a system that contains camera that scans the logs' outer and inner surface. The logs are groups by the quality of the logs.

The difference between the claims and Geiger is the claims recite " that the optical image analysis system creates an image of a long end, which image is create by a non-transradiating technique".

Savard teaches a system for sorting piece of lumber by scanning the cut ends of wood similar to that of Geiger. In addition, Savard further teaches that the optical image analysis system creates an image of a long end (col. 2 line 13-16, '890), which image is create by a non-transradiating technique (col. 4 line 5-10).

It would have been obvious to one of ordinary skill in the art, having the teachings of Geiger and Savard before him at the time the invention was made, to modify the scanning camera taught by Geigner to include the a scanning camera for cut ends pieces of wood of Savard, in order to obtain a sorting system for lumber by scanning the top surface as well as the cut end surface.

One would have been motivated to make such a combination because the system solves the problem of inefficiency of manual sorting due to the speed of lumber moving, and the ability to differentiate different types of lumber in short amount of time, would have been obtained, as taught by Savard. In addition, using different method other than infrared radiation, would be disadvantage in that apart from relatively high energy consumption, the intake of heat by the pieces of wood is also influenced by many other factors as type of wood, etc, thus making it impossible to draw exact conclusions, as taught by Geiger.

In regard to claims 3 & 10, Geiger in view of Savard discloses that a log end image (col. 2 line 13-16, '890), obtained by the optical image analysis (col. 6 line 12-14, '757), is combined with positions for individual points in the log (col. 8 line 34-39, '757), whose position have been obtained with another under bark measuring system in order determine the wood surface profile (col. 6 line 65- col. 7 line 3, Figure 5 item 44 & 42, '757, Note the examiner interprets the system checks if the log piece contains cracks or splits within the wood, so the examiner construes the system in checking under the bark)

In regards to claims 4 & 10, Geiger in view of Savard discloses that a log end image (col. 2 line 13-16, '890), obtained by the optical image analysis (col. 6 line 12-14, '757), is combined with positions for individual points in the log (col. 8 line 34-39, '757), whose position have been obtained with another on bark measuring system in order determine the wood surface profile (col. 8 line 57-61).

In regards to claim 5 & 11, Geiger in view of Savard discloses that a log end image (col. 2 line 13-16, '890), obtained by the optical image analysis (col. 6 line 12-14, '757), is combined with another log end image obtained with some other measuring method (col. 2 line 64-67, Note the examiner interprets that measuring method is used to determine the length of the log, or volume and shape of the log. In addition, the system uses different cameras in Figure 3 item 10, item 11, & item 38.).

In regards to claim 7/2, Geiger in view of Savard discloses that measurement results, obtained by some other measuring method (col. 6 line 12-14, '757), are used integrated in the image analysis to determine the wood surface profile (col. 4 line 31 – 34, Note the examiner interprets the system sorts the pieces of lumber accordingly by the signal from the CPU. The CPU achieves the information by analyzing the lumber. In conclusion, the end product is the system is able the determine the type of lumber by image analysis and then sort the lumber therefore, which is interpreted as “determine the wood surface profile”).

Allowable Subject Matter

Claim 6 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

In regards to claim 6, the prior art does state that a log end profile, obtained by the optical image analysis, is replaced or combined with another log end profile, obtained with some other measuring method, in those areas of the wood surface profile where the wood surface profile obtained by the image analysis is less accurately

determined than the wood surface profile obtained with some other measuring method for the same area.

The closest prior art states that a system may search a piece of log to determine the sorting quality of lumber. When the system scans the lumber for the properties a profile is create for that specific piece of log. This allows the system to capture detail images of the log, and allow a precise classification of lumber, but the prior does not state scanning the end of log with other functions, instead the system examines the outside of the log, and in addition only one scanned image is taken of the lumber, not multiple data sets to determine the best quality of image. Also, the prior art does not allow for certain parts of the image to be replaced, of the end of the log, which have poor quality with some other measuring device.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to O'Neal R Mistry whose telephone number is (703) 305-4675. The examiner can normally be reached on 9am - 6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh M Mehta can be reached on (703) 308-5246. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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